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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/593,392

07/03/2007

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64-001-TN

9874

23400 7590 10/18/2010

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EXAMINER

DINH, TRINH VO

ART UNIT

PAPER NUMBER

2821

MAIL DATE

DELIVERY MODE

10/18/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,392	Applicant(s) IWATA ET AL.	
	Examiner Trinh Vo Dinh	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 10-13, 21-24 and 26-34 is/are pending in the application.
- 4a) Of the above claim(s) 2-4, 10-13, 21-23 and 26-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 6 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>05/27/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

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This is a response to the amendment filed 08/25/2010. In view of the amendment, claims 1-6, 10-13, 21-24, 26-34 are pending in which claims 1, 5-6, 24 are amended, non-elected claims 2-4, 10-13, 21-23, 26-33 are withdrawn, and claim 34 is newly added. The amended and new added claims necessitate a further consideration as presented below.

Election/Restrictions

1. Restriction to one of the following species is required under 35 U.S.C. 121:
 - I. Claims 1, 5-6 and 24 draw to a microstrip antenna, among with other features, connection member connected to all of the plurality of antenna electrodes, and a switch closes fewer connections than the connections of all of the antenna electrodes to the ground electrode at once.
 - II. Newly added claim 34 draw to an antenna, among with other features, a connection member that selectively connect at least one antenna electrode among antenna electrodes to the ground electrode in response to one or more control signals.
2. The species are independent or distinct because claims to the different species recite the mutually exclusive characteristic of such species. In addition, these species are not obvious variants of each other bases on the current record.

There is an examination and search burden of these patentably distinct species due to their mutually exclusive characteristics. The species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries); and /or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

The newly added claim 34 is directed to species that is distinct from the species originally claimed for the reasons as presented above. Since Applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by originally presentation for prosecution on the merits. Accordingly, claim 34 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP 821.03. Thus non-elected claims 2-4, 10-13, 21-23 and 26-34 withdrawn from the consideration, and claims 1, 5-6 and 24 are considered as below.

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Detailed Rejection Action

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 24 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 24 has been amended to recite “***a connection member that is connected to all of the plurality of antenna electrodes and connects at least one antenna electrode among said plurality of antenna electrodes to a ground electrode***” which does not appear to be in the originally filed specification (i.e. “direct”). Thus, the recitation must be treated as “new matter”. However, if the applicant does not believe that this subject matter is “new matter”, an appropriate explanation is required including pointing out where support for this subject matter can be found in the origin specification. Note that the specification does disclose a connection member connected an antenna electrode to a ground electrode, and a plurality of connection members connected at least one antenna electrode to a ground member. However, the specification does not mention “**a connection member connected to all of the plurality of antenna electrodes and connects at least one antenna electrode to a ground electrode**” as claimed.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Ngai et al (US 2003/0164797 of record).

Respecting claim 1, Ngai discloses, in Fig. 1 and 3, a microstrip antenna comprising an insulating substrate (12 in Fig. 1 or 62, 64 in Fig. 3), a plurality of antenna electrodes (14a, 14b) disposed upon one surface of said substrate, each having a feed point (18a, 18b in Fig. 1 or 55 in Fig. 3, paragraph hereafter para. 0031]) for application of a radio wave signal; a ground electrode (20 in Fig. 1; 56, 60 in Fig. 3, para. [0033]) disposed upon the other side of, or in the interior of, said substrate, for supplying ground level; and a connection member (52, 58a, 58b) that connecting at least one antenna electrode (54 or 56) among said plurality of antenna electrodes (14a, 14b in Fig. 1, or 54, 56 in Fig. 3) to said ground electrode, at least at one spot (52, 58a, 58b) thereof which is different from said feed point (55), the connecting member (52) fewer than all of the plurality of antenna electrode (54, 56) to said ground electrode at once (*connection member 58a connecting antenna electrode 56 which is fewer than all of antenna electrodes "54 and 56" to the ground electrode 60*), wherein said connection member (52, 58a, 58b) is disposed at a location within a plane region occupied by said at least one antenna electrode (54 or 56) when said at least one antenna electrode is seen in plan view. Claim 1 further recites 'such that the direction of the integrated radio wave beam which is emitted from said plurality of antenna electrodes is inclined from the direction normal to said substrate'. Ngai discloses the same structural configuration as the claimed invention. Therefore, although not explicitly stated in Ngai, it is inherently that the configuration of the electrode and ground of Ngai would perform claimed function of "a direction of an integrated radio wave beam which is emitted from said plurality of antenna electrodes is inclined from the direction normal to said substrate".

Respecting claim 5, Ngai discloses said at least one spot (52) of the at least one antenna electrode (54) which is connected to said ground electrode (56) is in the vicinity of a terminal edge of said at least one antenna electrode, the terminal edge being on a side opposite to the feed point.

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7. Claims 1, 6 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Richards (US 6,195,047 of record).

Respecting claim 1, Richards discloses, in Fig. 1-4, a microstrip antenna comprising an insulating substrate (30), a plurality of antenna electrodes (20) disposed upon one surface of said substrate, each having a feed point (41-48 in Fig. 4) for application of a radio wave signal; a ground electrode (26) disposed upon the other side of, or in the interior of, said substrate, for supplying ground level; and a connection member (24 in Fig. 2B, col. 4 lines 10+) that connects at least one antenna electrode (20) among said plurality of antenna electrodes (20) to said ground electrode, at least at one spot (Fig. 2B) thereof which is different from said feed point (one of 42, 44, 46, 48, 50, col. 5 lines 10+), the connecting member (24) connecting fewer than all of the plurality of antenna electrode (20) to said ground electrode at once (*one connection member 24 connecting one antenna electrode 20 which is fewer than all of antenna electrodes 20 to the ground electrode 26*); wherein said connection member (24) is disposed at a location within a plane region occupied by said at least one antenna electrode (20) when said at least one antenna electrode is seen in plan view. Claim 1 further recites '*such that the direction of the integrated radio wave beam which is emitted from said plurality of antenna electrodes is inclined from the direction normal to said substrate*'. Richards discloses the same structural configuration as the claimed invention. Therefore, although not explicitly stated in Richards, it is inherently that the configuration of the electrode and ground of Richards would perform claimed function of "*the direction of the integrated radio wave beam which is emitted from said plurality of antenna electrodes is inclined from the direction normal to said substrate*".

Respecting claims 24 and 6, Richards discloses a substrate, antenna electrodes, and a ground electrode as discussed in claim 1. Richards further a connection members (24 and switch in col. 4 lines 10-30) connecting the at least one antenna electrode (20) among the plurality of antenna electrodes to the ground electrode (26), at least at one spot (Fig. 2B) thereof which is different from said feed point (one of 42, 44, 46, 48, 50, col. 5 lines 10+) thereof, and wherein said connection member includes a switch (col. 4 lines 10-30, or 76 in Fig. 4) that opens and closes the connections between said at least one antenna electrode (20) and said ground electrode (26) via said connection member (24), and the switch closes fewer connections than the connections of all of the plurality of antenna electrodes to said ground electrode at one (*one*

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switch closes a connection of one antenna electrode 20 to the ground member 26 which is fewer connections than the connections of all of the plurality of antenna electrodes 20 to the ground electrode 26). Claim 24 further recites the "*connection member that is connected to all of the plurality of antenna electrodes*" which is rejected under 112 & 1ST paragraph as discussed in paragraph 4 above.

Response to Arguments

8. Applicant's arguments, filed August 25, 2010, with respect to amended claims 1 and 24 under Ngai and Richards have been fully considered and are not persuasive. The Applicant argues that neither Ngai nor Richards teaches the newly amended subject matters "*the connection member connecting fewer than all of the plurality of antenna electrodes to said ground electrode at once,*" as recited in amended claim 1, or that "*said connection member includes a switch that opens and closes connections between said at least one antenna electrode and said ground electrode via said connection member, and said switch closes fewer connections than the connections of all of the plurality of antenna electrodes to said ground electrode at once*" as recited in amended claim 24. The Examiner positively disagrees for the following reasons.

Firstly, as discussed in the above rejections of claim 1, Ngai discloses the connection member 58a connecting **only an antenna electrode 56 to the ground electrode 60**. Thus, Ngai does disclose "*the connection member 58a connecting fewer than all of the plurality of antenna electrodes (54 and 56) to the ground electrode at once*". Similarly, Richards does teach "*one connection member 24 connecting one antenna electrode 20 which is fewer than all of antenna electrodes 20 to the ground electrode 26 at once*".

Secondly, respecting amended claim 24, Richards discloses a connection member (24 + a switch in col. 4 lines 30-40) including a switch (col. 4 lines 10-30) that opens and closes connections between one antenna electrode 20 and said ground electrode 26 via said connection member; Thus, Richards does disclose "*said switch closes fewer than the connections of all of the plurality of antenna electrodes to said ground electrode at once*" as recited in claim 24. Since

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Ngai and Richards both discloses every features of the claimed invention. The rejections are solid.

Lastly, in the argument, the Applicant intends to refer “**at least one antenna electrode connected to the ground electrode and at least one antenna electrode not connected to the ground electrode**” but the languages of the amended claims 1 and 24 are not so limiting.

Therefore, Ngai and Richards’s disclosure still read on the amended subject matters. In other words, the feature which Applicant relies on “the at least one antenna electrode not connected to the ground electrode” is not addressed in the claims.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiry

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh Vo Dinh whose telephone number is (571) 272-1821 and email address is trinh.dinh@uspto.gov. The examiner can normally be reached on IFW (Increase Flexible Work). The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens, can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 14, 2010

/Trinh Vo Dinh/

Primary Examiner, Art Unit 2821